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NEW HAMPSHIRE PLANT GROWERS ASSOCIATION / DECEMBER 1994 / JANUARY 1995

New Symbol for Direction Signs / See page 21

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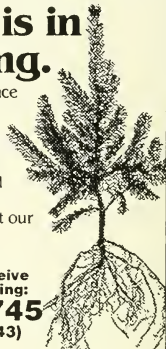
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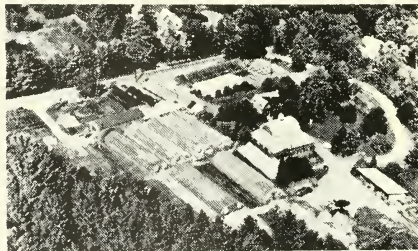
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January

JANUARY 4-6 **MANTS Winter Show**, Baltimore Convention Center, Baltimore, MD: 410-882-5300.

JANUARY 5 "Green School" begins; **Sturbridge Host Hotel & Conference Center**, Sturbridge, MA; for information: Kathleen Carroll at 413-545-0895

JANUARY 9-12 **ERNA's Best Trade Show**, The Concord Hotel, Kiamasha Lake, NY; for information: 203-872-2095.

JANUARY 17 **Maine Landscape & Nursery Association (MLNA) Annual Trade Show**, Holiday Inn-by-the-Sea, Portland, ME; for information: Edith Ellis at 207-225-3998.

🌿 JANUARY 18 **New Hampshire Plant Growers' Association/New Hampshire Landscape Association Joint Winter Meeting**, Granite Street Bar & Grill, Manchester, NH; for information: Peter van Berkum at 603-463-7663.

JANUARY 18-19 **Connecticut Nurserymen's Association Winter Meeting**, Aquatuf, Southington, CT; information: 203-872-2095.

JANUARY 22 **FTD New Hampshire Cup Design Competition and Color Workshop**, Bay State Floral, Manchester, NH; for information: Debra Defreze at 603-474-3020.

JANUARY 26-28 **New England Grows**, Hynes Convention Center, Boston, MA; 508-534-1775.

February

FEBRUARY 2-4 **New Hampshire Farm & Forest Exposition**, The Center of New Hampshire/Holiday Inn, Manchester, NH; information: Mary Ellen Pitman at 603-271-3788.

FEBRUARY 2-5 **AAN Management Clinic**, Galt House, Louisville, KY; 202-789-2900.

FEBRUARY 13-14 **Rhode Island**

Nurserymen's Association Education Day & Trade Show, Doubletree Inn, Newport, RI; 508-761-9260.

FEBRUARY 15 **MLNA Recertification Workshop**; for information: Edith Ellis at 207-225-3998.

FEBRUARY 15 **Massachusetts Certified Horticulturist (MCH) Exam**, Eastern Region Cooperative Extension Center, Waltham, MA; for information: 508-534-1775.

FEBRUARY 16 **How to Plant the Tree**, a Workshop with Alex Shigo, Manchester, NH; for information: Mary Reynolds at 603-271-2214.

FEBRUARY 22 **Vermont Association of Professional Horticulturists Annual Meeting**, Holiday Inn, Rutland, VT; 802-899-3361.

March

MARCH 5 **Florel Workshop**, Kojoian's Greenhouses, Andover, MA; for information: Peter Konjoian at 508-683-0692.

APRIL 7-8 **25th Annual University of New Hampshire Greenhouse Open House**, Plant Biology and Thompson School Greenhouses, Durham, NH; for information: Otho Wells at 603-862-3208.

April

APRIL 24-30 **Fourth Annual New Hampshire Orchid Society Show**, Manchester, NH; for information: Joanna Eckstrom at 603-654-5070.

About Our Cover

Design for symbol of nursery/greenhouse business directional sign: Ron Reedy, Reedy'signs, 77 Kingston Road, Exeter, NH 03833; telephone: 603-772-8774. Woodcut on page 13 by Bob Parker.

C O N T E N T S

DEPARTMENTS

FROM THE BOARD 3

FORUM 5

NH NEWS 7

ELSEWHERE IN THE NEWS 11

MEMBER PROFILE 16
Barker Valley

PPGA Highlights 25
Stock Plant Recommendations

WORTH REPEATING 26

DIAGNOSTIC UPDATE 28
Dr. Cheryl Smith

FEATURES

Some Changes in Arboriculture 13
Jeff Garland

AG Development Update 16
Gail McWilliam

New Symbol for Nursery/
Greenhouse Signs 23
David C. Seavey

Factors in Farm Stand Success 23
Paul Rees

COLUMNS

THE GRIFFIN GURU 5

Z-NOTES 9
Jim Zablocki

HOW ABOUT HERBS 12
Tanya Jackson

THE GREEN SPOT 15
Mike Cherim

The *Plantsman* is published in early February, April, June, August, October, and December with copy deadlines being the first of each prior month. While camera-ready ads are preferred, set-up assistance is available at a nominal fee. Free classified advertising is offered as a member service. We will carry a short message (no artwork or logos) for one or two issues of *The Plantsman*.

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For further information, please contact the editor: Robert Parker at the UNH Research Greenhouses, Durham, NH 03824, (603) 862-2061; or PO Box 5, Newfields, NH 03856, (603) 778-8353.

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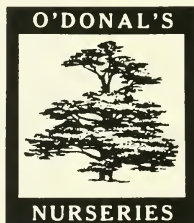
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Cut Flowers

Tammy Hathaway

Growing cut flowers is new for me. My focus in the nursery business has been on growing perennials in containers, so it's been challenging to try my hand at field-growing both annuals and perennials. We offer a pick-your-own cutting garden along with fresh bouquets which I make up daily. We use the honor system, which I think makes people feel good, trustworthy.

All my knowledge about growing perennials has come from practical experience, reading, listening to others, and of course, making mistakes. I'm learning about cut flowers the same way. While reading the book *Cut Flowers for Sale* (which inspired me to try this venture), I read about the Association of Specialty Cut Flower Growers (ASCFG). I wrote to the ASCFG and they sent me two of their most recent issues of "The Cut Flower Quarterly."

What excited me most was to find out that this national organization was broken down into eight regions, each with its own director. And information on crops from other growers in the Northeast was great!

"The Cut Flower Quarterly" is full of information on pricing, production and post-harvest procedures, and trial results of new varieties. A culture profile of one specific variety is in each issue. Marketing strategies are also focused upon. Members can learn of upcoming seminars--regional and national, new books and publications, and upcoming legislation. And a classified ad section is free to all members.

A second publication, which the ASCFG distributes yearly, is its membership directory. It provides a state-by-state listing of growers of both fresh and dried crops. It in-

cludes a brief description of their operations—size (both field and greenhouse), major crops and, when available, phone and fax numbers, addresses and contact people. This directory also has a listing of major crops from "Achillea" to "Zinnia." These are in table format and includes each grower (by state) and the type of crop produced (fresh, dried, or both). I find this format, with the information indicating what varieties are being grown where and how they're produced, very helpful.

The directory also has sections for growers interested in contractual arrangements, buyers and wholesalers of both fresh and dried floral material, suppliers, retailers, and designers.

The ASCFG also holds an annual national conference offering seminars, a trade show, floral design displays, and informal regional meetings where members can discuss specific growing and marketing strategies.

I've found this organization to be extremely helpful in planning our own operation. It has made a difference in my crop choices and will help me in finding a niche in the cut flower industry.

I feel that everyone, from a person with a small roadside stand like our own to the owners of larger operations—both field and greenhouse, can benefit from the ASCFG. As stated in its directory, "our essential goal, simply put, is to help growers of specialty cut flowers produce and sell a better crop."

Tammy Hathaway has a PYO cut flower business in Stratham, New Hampshire. She can be reached at 603-778-3912. The Association of Specialty Cut Flower Growers is at MPO Box 0268, Oberlin, Ohio 44074. Its phone number is 216-774-2887.

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New England Greenhouse Conference Report

Henry Huntington, the NHPGA representative on the NE Greenhouse Conference Committee, reports "nothing but success." Attendance ("1700 plus") was up, speakers were seen as excellent, more vendors participated than in the past. The one cloud in a sunny sky the bus tour may have to be re-evaluated.

There'll be a full report at the Winter Meeting on January 18. The NHPGA is the host organization for the 1996 conference and Henry may have something to say about that as well.

Reminder

It appears that many pesticide applicators are unaware that the PA recertification meetings are no longer announced in the *Market Bulletin*. You may obtain a list of upcoming meetings from:

- your local UNH Cooperative Extension office,
- the Division of Pesticide Control (603-271-3550),
- or the UNH Cooperative Extension Entomology Department (603-862-1159).

The list is free and updated on a regular basis. It includes all meet-

ings (commercial and private) that have been awarded NH pesticide recertification credits.

Worker Protection Exam Required for All Licenses

"The 1994 growing season is coming to a close and the time to renew pesticide applicators licenses for 1995 is fast approaching. There are still a significant number of certified applicators, however, who have not yet added the Worker Protection component to their certification. If you are one of them, you are reminded that all private applicators and certain commercial applicators (those whose activities include pesticide applications at agricultural establishments) must pass a Worker Protection exam before their licenses will be renewed for 1995. Keep in mind that the general provisions of the Worker Protection Standard go into effect on January first.

Exams are given every Tuesday at the Division of Pesticide Control in Concord or you can make arrangements through Cooperative Extension to take the exam at your local extension office. The Worker Protection exam should take no more than twenty to thirty minutes.

To prepare for the test, you may obtain appropriate study materials

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from Cooperative extension by calling them at 603-862-1159. The primary training guide is the "How to Comply" manual. Videos and other training aids are also available.

Once you have reviewed the study material, simply call the Division of Pesticide Control at 603-271-3550 (if you wish to schedule your exam in Concord) or contact your extension educator to set up a test date at your local extension office. By doing this now, you will ensure that your license will be renewed in a timely manner. It will also allow you to train your employees before the January first implementation date of the standard."

Murray L. McKay
Division of Pesticide Control

Thanks

Thanks go to Sue Englund and Kirk Wyant and the staff of Gateway Gardens, Concord, for welcoming NHPGA members and friends to a twilight meeting held at Gateway on September 14. The story of how a garden center emerged from an idea and a field in so short a time was both useful and entertaining. After a tour of both the shop and the grounds, guests enjoyed refreshments and good company.

Gateway is a work in progress. Kirk showed the beginnings of a pool and waterfall in the hillside above the parking lot, another greenhouse is planned as well. And there'll be more after that—so there will be plenty of changes to stop by and see in the months ahead.

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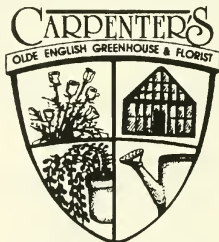
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Research Fund Begun

At its October 11 Meeting, the Board (Ann, Bob, Chris, Henry, Peter, and Tammy) listened to a presentation by Jim Truncellito, a member of Davis, Towle, Gearan & Truncellito, a Concord insurance and financial services firm, who spoke briefly on investment possibilities for a NHPGA fund, the interest from which would be used to support research and projects (not necessarily in New Hampshire) that would benefit NHPGA members and the state's green industry.

After Jim left, and after much vigorous and animated discussion, the board voted on a motion made by Henry and seconded by Peter to authorize the investment of \$10,000, \$5000 in 1995 and the remaining \$5000—minus expenses—in 1996.

The Board hopes to continue adding to the fund through continued profitability of its current roster of events and perhaps some specific fund-raising.

It feels that continued research is vital to the health of the industry and that as government funding declines, organizations such as the NHPGA must fund the new work.

(An omission: in the list of people donating time and effort to the Summer Meeting, we forgot to mention that Rick Perillo, the organizer of the all-you-can-eat barbecue of our last few years, contributes an amount based on the number of people he feeds back to the NHPGA for use in its scholarship fund or other membership-oriented activities. This year's amount was \$123.00 and will be added to the NHPGA Research Fund. We thank Rick and appreciate his support of the NHPGA.)

Membership News

New Owner

New faces are at Churchill Garden Center, Route 101C, in Exeter. Jim and Jean Moser became the new

owners in mid-October. However, in what looks like a very smooth and comfortable transition, Jim Churchill will remain as grower, allowing Jim Moser, as Moser says, "time to get all the ducks in a row." Judy Churchill will continue in the shop. Eventually, Jean will become involved with that aspect of the business, but right now she's a full-time mother to four young children.

Jim Moser has a degree in ornamental horticulture from Ohio State, worked for Chem-lawn for ten years before starting his own lawn care business, Granite State Lawn Care, in Manchester, in 1988.

He wanted to get back into ornamentals. He thought "wholesale," then "retail," and—seeing Churchill as a "great opportunity" in an area of the state with major growth potential, sold his lawn care business to Chemlawn and bought it.

Moser hopes to expand the ornamental line, "buying in material I believe in." There may be a few cosmetic changes—nothing major—"Churchill is a good business already."

To Be Noted

Henry Huntington, Pleasant View Gardens, Pittsfield, has been elected to a new three-year term on the Board of the Professional Plant Growers Association (PPGA) and will also assume duties as Secretary/Treasurer.

Peter S. Konjoian, President of Konjoian's Floriculture Services, Inc., and part-owner of Konjoian's Greenhouses, Inc., of Andover, Massachusetts, has joined the Ohio Florists' Association as a publications and education consultant.

Congratulations and best wishes to both.

Sympathy Extended

Robert Ellison, 77, of 5 Brentwood Road, died October 29 at the Rockingham County Nursing Home. Born in Exeter, the son of Lincoln and Daisy (Davis) Ellison, he was a

life-long resident. He was a graduate of UNH, class of 1937. He worked at Exeter Brass and General Electric of Somersworth and retired as Engineer from Raytheon in Andover, Massachusetts. He also owned and operated Ellison's Greenhouses, known for its unusual and high quality plant material.

Sympathy is extended to Bob's family: his wife of 56 years, Dorothy (Tuttle) Ellison, a daughter, Patricia Washburne of Middleton, Massachusetts, a son, Kenneth, of Goode, Virginia, two grandchildren, a great-grandson, and several nieces and nephews.

FFA Results

On October 29, the FFA fall horticulture competition was held at the University of New Hampshire in Durham. The first place team was Winnisquam (Tilton); second, Co-Brown Northwood Academy; third, Manchester School of Technology. Individual winners were: first—Ginger McVicar (Co-Brown); second—a tie between Breanna Smith (Fall Mountain, Alstead) and Akiesha Samuelson (Winnisquam); third, Tim Cote (Manchester).

Congratulations to the winners and thanks to the volunteers who made this event possible. These include Rene Gingras, Vicki Lawrence, Angi Pelletier, Dana Sansom, Maria VanderWoude, and Dave Wilson.

Workshops Announced

Along with the FTD New Hampshire Cup Design Competition at Bay State Floral in Manchester, New Hampshire, on January 22, a workshop on "Color in Design" is being planned. It sounds fairly comprehensive. Three designers will each demonstrate work in one of three color areas: "Monochromatic," "Vibrant," and "Pastel." A professional color counselor will discuss coordinating flower colors with the dress, skin tones, and personality of clients. (This might be very useful in-

formation in planning a wedding, for example.) And a talk on new color trends in the home industry by a buyer from a leading department store is also scheduled. And there may be more! For details, contact Debra Defreze at 603-474-3020.

Basics are important. Just how important will be shown at a workshop dealing with the basics of tree planting to be held in Manchester on February 16. Featured speaker will be Dr. Alex Shigo, who'll deal with the most basic of the basics—the right depth, the proper amount of mulch, etc.—and why trees die when these are not done correctly.

A second part of the workshop will be a panel discussion by various representatives—volunteers, town officials, vendors—of the SBA program.

Pre-registration is required, there will be a small fee. For more information, contact Mary Reynolds at 603-271-2214.

And Then There Were Three...Showtime '95

"We're BAAAck," says the Farm & Forest brochure. And so it is. As of November first, these are some of the 1995 show highlights.

Thursday features an all-day NH Fruit Growers Meeting.

Friday, the vegetable growers have their all-day session. In the morning, there's a series of talks un-

der the heading, "Alternative Tillage Techniques While Meeting the ACP Standards in the 1985 Farm Bill, a featured speaker in the afternoon is Dr. Richard Ashley, Professor of Plant Science, UCONN, discussing "Growing Vegetable Transplants—Or Should I Buy Them?" And Friday night is 4-H Night, with lots of hands-on activities for kids.

On Saturday, the NH Beekeepers Association, the NH Dairy Goat Association, the NH Llama Association, and the Audubon Society of NH all have programs.

Also, NOFA-NH and the NHDA Organic Certification Program are presenting a program of speakers that includes: Paul Sachs, North Country Organics, Bradford, VT ("Managing Turf Soils for the Long Term"); Leandre Poisson, author ("Solar Gardening with the American Intensive Gardening Technique, Using Organic Methods"); David Trumble, Green Truck Farm, Francistown, NH ("Organic Tomato Disease Control"); and Tim Sanford, Luna Bleu Organic Farm, Royalton, VT ("Organic Seedling Production for Commercial and On-Farm Use").

Also on Saturday are "four master gardeners with great programs" and the Farm & Forest Auction ("NH products at great prices").

The "Petting Farm" and the trade show remain—and are there all three days; new this year is a "Food Festival," featuring NH products, in the Armory.

If interested in booth or commodity meeting space (the dates are February 2-4, the place is the Center of New Hampshire Holiday Inn & Convention Center, Manchester), contact Mary Ellen Pitman at 603-271-3788.

Two other shows are in planning stages. The Twenty-fifth Annual Greenhouse Open House at the University of New Hampshire in Durham is scheduled to be held April 7-8 at the greenhouse facility there. A cooperative effort of Plant Biology and the Thompson School, the show will be the traditional mix of student displays, plants for sale, lectures and food, raffle tickets and soil testing, and lots of people around to answer most any gardening question. For information, contact Otho Wells at 603-862-3208.

And the Fourth Annual New Hampshire Orchid Society Show, "Gallery in Bloom," will be held April 24-30 "in Manchester." Three locations are being considered there, but as of early November, no final choice had been made. Planners see at least 40 exhibits and lots of plant sales wherever it's held. For information, contact Joanna Eckstrom at 603-654-5070.

(The Orchid Society still meets at 1 PM on the second Saturday of each month, but in a new location, Bethany Chapel, on Newberry Street in Manchester. Again, for information, call 603-654-5070.)



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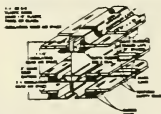
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Three FloraStar Winners Announced

(from PPGA News, September, 1994)

'Starburst Red' Geranium (Ball FloraPlant) is described as a best-seller, its uniform, centered flowers—on shorter stems—do not fade and last longer, it has pleasant scent and compact habit. A unique aspect is that the large, single flowers have white petals heavily streaked with red in "a kaleidoscope of patterns." These variations are caused by what breeders call a "jumping gene" which makes the pattern unpredictable and each plant unique.

'Pink Ice' Double Impatiens, one of the Summer Ice series of double-flowering, variegated-leaf impatiens from D.S. Cole Growers, Inc., is described as floriferous, very compact, with fully double flowers (rich lavender centers progressing to light pink petals) contrasting well with foliage. It's also easy to grow—with no pests or disease and no growth regulator requirements. Self-branching, it grows 12 inches tall, its neat habit lending itself to a variety of uses.

'Patriot Rainbow' Lantana (American Daylily & Perennials) is "colorful" and "uniquely compact," growing only 12-16 inches tall. It's multicolored florets open electric yellow and develop through tones of orange to final fuchsia pink. It thrives in summer heat; its compact globe-shaped mounds make a dramatic low border and work well in hanging baskets and patio pots.

For a free full-color flier describing cultural information on all three, contact the PPGA office at 1-800-647-7742.

Bulb Media Tips

(from *Greenhouse Manager*, November, 1994).

Growers forcing bulbs for pot plant production should take a serious look at their growing medium. A.A. DeHertogh, with North Carolina State in Raleigh, said pure peat and sand media can cut down on crop quality.

"Pure peat generally holds too much water, while sands have a very low pH and quite a bit of salt." DeHertogh said. "They just don't have very desirable traits."

Forcing bulbs requires a good, well-drained mix, DeHertogh said. Here are some commercially available mixes that are acceptable for forcing bulbs:

Tulips: Ball Grower Mix No. 2, Ball Grower Mix No. 3, Metro Mix 350, Metro Mix 360, and Sunshine Mix No. 4.

Hyacinths: Ball Grower Mix No. 2, Ball Grower Mix No. 3, Metro 350, Metro 360, Metro 500, and Sunshine Mix No. 4.

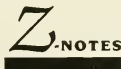
Daffodils: Fafard No.2, Fafard 3-B,

Fafard No. 4, Metro Mix 350, Metro Mix 360, Metro Mix 500, and Sunshine Mix No. 4.

Here are some additional tips on growing medium from DeHertogh:

- make sure the medium is sterile;
- pH should be 6.0-7.0;
- soluble salt level should be low;
- the medium should be moist at planting time;
- at planting time, make sure the medium is the same temperature as the bulbs (50F-63F);
- for freesia, Dutch iris, and lily bulbs, the medium must be fluoride-free.

For more: A.A. DeHertogh, North Carolina State University, 120 Kilgore Hall, Box 7609, Raleigh, NC 27695; Telephone: 919-515-2011.

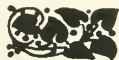


BARK!!! The benefits of bark in a soilless mix go unrecognized. Bark will make a poor mix better. Bark will give the additional porosity (air space) that is needed in basic peat mixes. Not only is bark an inexpensive amendment, but if added in enough quantity, it adds weight needed for efficient outdoor plant production. And bark doesn't shrink or degrade the way peat moss tends to do over a period of time.

Generally speaking, I have fewer problems with people growing plants in bark mixes than with those not. Because of the porosity, plants will root faster. Bark gives the drainage needed for root development. And, because pythium requires a wet soil in which to develop, better drainage means less disease pressure. Better drainage also translates into less fungus gnats and shore flies—both requiring decaying vegetation, something that often occurs in wetter mixes. Bark also gives off toxins that suppress diseases that could develop inside your mix.

Aged pine bark is the key to—and bark ash is the ultimate for—stability. Bark insufficiently aged or only composted can actually be detrimental to your plants' health and vigor. Poorly aged bark will rob nitrogen from your mix in order to help continue its aging and composting process. (Bacteria is actually what consumes the nitrogen, but these bacteria are responsible for the composting process.) Having composting occur in your soilless mix could cause shrinkage and collapse. Whether you buy premade mixes like Metro Mix 360 or 510 (which use bark ash and may have aged pine bark in them as well) or mix your own, be sure to buy high-quality ingredients. In four letters, dogs say it all.

Jim Zablocki, Territory Manager, The Scotts Company, Northeast, is at 603-224-5583.



HOW ABOUT HERBS

Promote "Native." Here are some herbs—all native—that were being used in North America long before the first European colonists came.

Jack in the Pulpit (*Arisaema triphyllum*), sometimes called Indian turnip, is a woodland perennial wildflower and a fine shade garden herb that was once used as a headache treatment. The root, which contains the poison calcium oxalate, was pounded with water into a pulp and then allowed to dry, rendering it harmless. In this state, it was used as snuff and a medicinal tea. About two feet tall when mature, a clump of "jacks" is a fine accent plant.

Mountain Mint (*Pycnanthemum pilosum*) has a pungent mint-like odor and an interesting pinkish-white cluster of flower heads that dry well. Unlike many mints, this one is not rampantly invasive, but grows steadily into a larger clump. Native to the eastern United States, it was used by Native Americans. It can take shade or sun, moist or drier soil.

Bearberry or Upland Cranberry (*Arctostaphylos uva-ursi*), a member of the heath family, was once used as an "herbal tobacco" and the dried leaves as an astringent tea considered soothing for indigestion. It's a fine herbal ground cover, a trailing perennial shrub with deep green, odorless, leathery foliage and bland red berries that can be cooked and mixed with other berries. They are a favorite food of bears in spring.

Bergamot or Bee Balm (*Monarda didyma*) is a well-known herb—and it's a native. The leaves, stems, and blossoms of this vigorous herb makes a tasty natural tea used for soothing sore throats and settling upset stomachs. The newer varieties of *Monarda* are less prone to mildew and will grow in a partially shaded or sunny garden. This herb also combines well with regular tea. According to legend, this was the tea that was drunk in place of the tea that was thrown into Boston Harbor

at the beginning of the Revolutionary War.

Borage (*Borago officinalis*) is a common native herb, the leaves of which make a tea rich in calcium and potassium. Native Americans used borage to promote healing and relieve cold discomforts. It's a rather sprawling herb, but the clear blue flowers are delicate and lovely. It grows readily from seed.

Hepatica or Liverleaf (*Hepatica americana*) is a small wildflower whose leaves appear after its white, blue, or pinkish flowers. It makes a lovely ground cover, growing about six inches high. It does best in partial shade and rich neutral soil and was used medicinally for liver problems

by Native Americans.

Finally, *Filipendula ulmaria*, a native North American plant commonly called Queen of the Meadow, is a dramatic perennial for the sunny moist herb garden. I have seen it in gardens in Ohio, but have not found it in a nursery here. It grows six feet tall and has yellow flowers. It's used as a dye plant, making a greenish-yellow dye, and is fragrant.

These are just a few of the native plants that have herbal uses that are not commonly seen within the boundaries of area herb gardens, although they certainly would be attractive there.

Tanya Jackson, a well-known area herbalist, can be reached at 603-6774

BOOK REVIEW

The editor was recently given an opportunity to review *Grower-Talks on Retailing*, edited by John Saxton, published by Ball Publishing, containing 182 pages of highlights from articles published in *GrowerTalks* magazine from September, 1988, through June, 1993.

The book is divided into seven chapter headings (Marketing, Customer Service, Employee Management, etc.), under which are anywhere from eight to 25 related selections. These range in size from a couple paragraphs to six or seven pages. Twenty-two black and white photographs illustrate points made in the text.

This book is basically about what has been done—these are the solutions interviewers observed when visiting retail greenhouses and garden centers across the continent. Most aren't as surprising as they are sensible: strategies based on the basics of service, efficiency, quality. Some variations on these themes were clever—even funny ("Moose Bucks" was one), and people were aware of the importance of trends, but when you read this, you realize the industry is run by very practical, no-nonsense people.

At first, I wanted to know how these people did these things. Then, as I was reading about a florist who grew tired of the fake country facades on the businesses around her and decided to "go Victorian" and was wondering just how she went about creating this transformation, I began to see that maybe the point of the piece was a message—"Be Different than your Competition." The book is not a how-to-do manual, but more of an inspirational tract—a series of small stories—most with an underlying message, which, if appropriate and followed correctly—could lead to the

reader's self-improvement (i.e. more profit).

Rather than wonder how Bob Maddux's "Delphi Way," an intriguing list of 14 rules on which to base employer/employee relationships, came about ("Did these evolve? Or all happen at once in the midst of a crisis?"), you realize that the article is giving you the message, "Prevent high turnover by treating employees well," along with 14 guideposts to help you do just that.

It works—you'll get lots of ideas. And some will be genuinely helpful. It's a book in which to browse—but to maximize its usefulness, you might begin by reading two of the longer selections ("Marketing—What It Is and How to Do It" and "Practical Ways to Discover and Serve Your Niche Market," both in the middle of Chapter Six) and use these as a reference point from which to see both your own business and the many ideas offered.

The only mention of New Hampshire I noticed is of a Vermont firm filling the bedding plant contract with "The Balsam's Grand Resort Hotel in Dixville Notch, site of the first open poll in the presidential primary"—which seems to suggest that we may not be at marketing's cutting edge—which might be another reason to read the book.

It's compact, efficient—it's nice having all these ideas (probably hundreds, both stated and implied) in one place. And it's upbeat—it might feel good in late January to have something on your desk that's filled with nothing but success (BP).

GrowerTalks on Retailing sells for \$27. It can be purchased from Ball Publishing, PO Box 9, Batavia, Illinois 60510-0009, phone 1-800-456-5380.

JEFF GARLAND

"THE CLIMBER played his line out slowly as he edged toward the end of the almost horizontal oak leader. His climbing rope was looped over a high crotch on the main trunk. He kept his weight on his rope to help maintain his balance. The bark of the leader was smooth and cluttered with suckers and deadwood. The stinging hair of old gypsy moth larvae irritated his bare arms as he inched out the limb to do his pruning.



Using the rope again, he returned to the trunk, repeating these hazardous journeys several times before the tree was pruned properly."

Such are the daily tasks of a professional tree climber, as he becomes more trusting of his skills and gear, his competency quotient rises. In modern arboriculture, the scenario has become less frequent.

Today, many tree companies have varied pieces of equipment to move a climber around the tree automatically. Aerial lifts, cranes, brush chippers, stump grinders, spray rigs, and loaders are some of the entrees on the arborists' menu. Climbing aids, cabling equipment, chain saws, fertilizing needles, pole pruners and so forth are just some of the endless desserts.

As in many fields, the improvements in equipment

have been achieved through constant modifications. For a practicing arborist with over twenty-five years of experience tucked under his climbing belt, each change usually is greeted with heavy skepticism, followed by great wonderment that the new thing works so well.

At the beginning of my work career, aerial lifts, or bucket trucks, were quite new in our industry. These were developed and used primarily for the utility end of our business. Most utility poles were shorter and trimming specifications were narrower, so many buckets only had a working height of about 45 feet. Poles have gotten higher, trimming specifications wider, creating a need for more sophisticated lift devices. Buckets reach higher and can work at greater angles to be able to reach laterally for greater distances.

Today also has seen a much greater use of lift trucks in the private sector of our trade. Buckets are being mounted on the rear of many trucks to enable an operator to back to a tree, getting more height and keeping away from the cab.

Operation of many of these new lifts is quite simple and mastering their manipulation is much easier than hooking up a VCR. Consequently, our vocabulary is even changing: instead of tree surgeons and climbers, we seem to have more technicians and operators.

Brush chippers of the past were definitely beasts to use. They were what we called "drum chippers," which had whirling knives that ripped the brush from an unsuspecting hand. Generally, you had to throw the brush at the chipper mouth, one stem at a time and exit in a hurry, before you were whipped to death by its end. Today's modern chipper is mostly of the disc-type, which pulls the brush from you in a much more civilized manner. The chipper has two rollers, which enables the operator to feed whole armfuls of brush into the chipper mouth. The drum chippers used to spit wood back at the operator, but today's chippers can chew a very large diameter piece of wood. Remembering those old drum chippers make me shudder in several ways. They not

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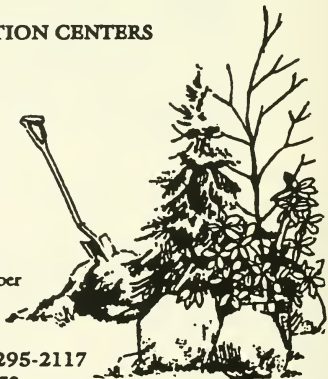
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only physically beat you up, but their incessant noise wore you down by the end of the day.

We, as an industry, were much more lax on personal safety protection then than we are now. It's sad at tree gatherings to see how many of the "old guys" just don't catch the end of your sentence like they used to. Ear protection, leg chaps, and hard hats are mandatory use now and back belts are close to being required.

Years ago, our chain saws were heavy and bulky. Today, they're such a pleasure to use. Weight reduction, increased r.p.m.'s, slick design, many foreign models... makes it sound like the automotive industry, doesn't it? Instead, this is the state of the chain saw we use today. Romanticized in the '70s along with wood stoves and solar power as the necessities for living in New England, the chain saw has revolutionized the work of arborists like no other tool. Small saws with tremendous power for fast cutting enable a tree worker to dismantle the largest tree in short order.

There is a downside to new technology that is disturbing. Modern tools make the various jobs easier to do, requiring a less skilled worker to do it. This translates to a possible drop in quality of the finished product. Hand skills require more thought and time to accomplish a technical solution to a problem. Less experience people can do passable work, oblivious to tradition and ethics of the trade.

It often seems that some appreciation of the tree itself has been lost. Good tree companies have balance and offer many services to preserve our urban forest. It is clear that the new sophisticated equipment is exciting. Cabling and bracing gear is much improved, hence more apt to be used. New fertilization methods and tools have increased efficiency, enabling the soil to be replenished with the elements the tree needs in a more direct manner. Spraying equipment and new products are so refined that spray applications are safer and more effective.

Change, of course, is necessary and good, but it must be tempered by respect for the past. Arboriculture has been very rewarding for me. It has continually stimulated interest and enthusiasm for what the next day might bring.

Jeffrey Garland is the General Manager of Keene Tree Service in Keene, New Hampshire. He is also the Vice President of the New Hampshire Arborist Association and a career arborist.



The Green Spot

Diapause Zool.—a period of rest during the development of insects and other arthropods, characterized by a cessation of growth in immature stages

"Diapause" is a term we have to understand if we use biological pest control, as some of the agents we purchase may undergo diapause. *Aphidoletes aphidimyza* and *Orius insidiosus* (an aphid predator and a thrips predator, respectively) are two common examples. In the case of these two predators, diapause is induced by photoperiod: both need a 14-16 hour day.

When day length falls below acceptable levels, these insects will stop reproducing; any existing offspring will lie in wait and consequently, the adults will slow their feeding because they no longer need the energy required for reproduction. However, they can often be tricked into staying active by simply providing supplemental lighting. *A. aphidimyza*, for example, will not undergo diapause within a 60-foot radius around a simple 60-watt incandescent light, assuming temperatures average over 40°F. (Low temperatures—and other factors—can also cause diapause.)

Experiments are now being conducted at the University of Maine, Orono, with *Orius insidiosus* on short-day crops, namely mums. UM is using a "blue light" to prevent diapause while not inhibiting flower development. If successful, this experiment will open a door previously thought inaccessible.

Other arthropods may similarly undergo periods of slowed activity caused by photoperiod, temperature, etc. Though not a true diapause, this period may result in decreased efficacy. However, in winter, most pests slow down too.

Being growers, I'm sure you're all familiar with photoperiod. After all, you wouldn't have early flower bracts on poinsettias without manipulating the photoperiod. Well, sometimes the same rules apply to biological pest control agents—just in reverse.

Mike Cherim, owner of The Green Spot—a company supplying biological pest control agents and associated products—can be reached at 603-942-8925.

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I Baker Valley

"Snow is Important."

SUPPOSE New Hampshire had always been a part of Palmer Koelb's life. His father was an architect specializing in the design of factories and industrial buildings. For two years—1956 and 1958—a factory designed by him won mention by *Factory Magazine* as one of the ten best built in the United States. Both are in New Hampshire—one is the Split Ball Bearing Plant in Keene and the other, the Miniature Precision Ball Bearing Plant in Lebanon. Ownership has changed, but both are still standing and whenever Koelb drives by Miniature Precision's serpentine wall, he thinks of his father and realizes that his connection to New Hampshire was there long before he moved here himself.

He's been in the nursery business 32 years, first in Weston, Massachusetts. He sold the business there in 1979 to move north to New Hampshire—to Salisbury, north of Concord. When he sold Salisbury Nursery in 1987, it was—with 26 acres in production—the largest in the state. Again moving northward ("I figure by the time I retire, I'll be located somewhere near the Arctic circle") with two acres of grafted material, he settled in Wentworth, 17 miles northwest of Plymouth.

He owns the land on which he built his home and another piece "for retirement," but for his nursery, he leased ten acres of bottom land on the Baker River. The two acres of material planted out to four "He's done no propagating since he's been up here, buying in what he grows, and today there are ten acres of neat rows six feet apart leading the eye toward the Baker River. Beyond

the river is the ridge line formed by Carr Mountain and Ames Mountain and Currier Hill (2,000 feet is required to qualify as an official mountain—Currier didn't make it). This land on which his nursery grows was chosen precisely because of size limitations—"so I can't work myself to death."

He grows 96% of what he sells; he prefers conifers—"up here we have seven months of winter and conifers seem most useful in the landscape." Winter over, Baker Valley's "in full swing by mid-May (he wholesales throughout New England) and stays that way well into October."

He concentrates on dwarf, "dwarf" being "any cultivar substantially smaller than the normal species," "substantially smaller" being 5-10 % of its genetic potential. "Dwarf" is always relative—a dwarf white pine can be 20 feet tall, but this is small compared with a 200-foot pine in the woods.

There's strong interest in dwarf conifers right now, but many of the nurseries producing them are in the Northwest and the cost of shipping is often more than the price of the plant. So it's a good time to be growing them right here.

The work is straight-forward: he top dresses in the spring, he mulches liner beds and some of the stock still adapting to the climate ("mulch duplicates forest floor litter, keeps weeds down, and moderates soil temperature"), but most of the nursery is kept clean ("to keep mice out").

He irrigates: water is pumped from the river through a three-inch pipe and then through a series of valves to an overhead system; the timer? "When the pump runs out of gas."

Mountain Ash is "a magnet for borers" and sometimes Japanese beetles require spot spraying, but in general, insect problems are rare.

He root prunes every three or four years—cutting back roots produces more roots; more roots makes a stronger plant.

And there's some shearing—he gives the White and Red Pine a more cone-like shape and the Tanyosho Pine (*Pinus densiflora* 'Umbraculifera'), used in Japanese gardens, is cut to accent the table-like top.

In the fall, he plants field oats (not winter rye) between the rows as a cover crop. Rye "comes back in the spring with a vengeance," while oats die at 20F (last winter it reached -45F). The cover crop retards erosion and the dead stalks hold snow—and snow is insulation ("the more snow the better").

THE NUMBER of plants grown seems extensive, the list includes five types of hemlock, seven of fir, 24 of spruce, 20 of pine....

Dwarf *pinus strobus* varieties include 'Blue Shag,' 'Nana,' and 'Horsford Dwarf'; he grows *Picea abies* 'Conica' (Dwarf Alberta Spruce) and claims those grown in the East are better—fuller at the base (up to three and a half feet wide)—than those grown in the Northwest (18"). The growing season is shorter here, causing the trees to grow more slowly and fully. A favorite is *Picea abies* 'Gregoryana Parsonii,' a dwarf dense irregular mound with tufts.

The smallest dwarf he grows is a Norway spruce (*Picea abies* 'Witch's Brood') that grows about an inch a year, in 30, it'll reach maturity—30 inches high and about as wide.

Not everything's in his catalog. Some are two feet (three mature Dwarf Hemlock (*Tsuga canadensis* 'prostrata')—18 years old, for example, are not listed) or too new (he's usually trying out new material, but won't list it until he's satisfied it will do well). Dimensions given in the catalog are the average heights and widths after ten years' growth. Because most dwarfs grow so slowly—Huss Twiggy Hemlock (*Tsuga*

canadensis 'Hussi') grows only two inches a year—that these figures seem more useful for landscapers than final mature sizes.

Weeping conifers include cultivars of Norway spruce, white pine, Scotch pine, American arborvitae, hemlock....

Some deciduous stock is grown as well: the native Canoe Birch (*Betula papyrifera*), the bark of which doesn't turn white until the tree is about six years old—"most nurserymen grow 'White Spire,' which gets its white trunk at an earlier age, but isn't as hardy;" *Katsura* (*Cercidiphyllum japonicum*), with its foliage scent after frost reminiscent of cotton candy....

Weeping deciduous varieties include a Weeping Birch (*B. pendula* 'Youngii') Camperdown Elm (*Ulmus glabra* 'Camperdownii')—which is Scotch Elm grafted onto American Elm stock, and two varieties of Weeping Siberian Pea (*Caragana arborescens* 'Pendula'), one ("Pendula Walker") a threadleaf.

EQUIPMENT is a major investment ("good equipment saves money") and includes a Knuckleboom loader (with two hydraulic extensions); a Skidsteer Loader, a crawler excavator, a tree spade ("anyone digging large trees by hand is not doing it efficiently"), a Kinkelder cultivator: made in Denmark, it has "vibrating teeth" (basically, each tooth is actually the end of a coiled spring fastened to the frame; the frame can be adjusted with a hand crank to any width from five to eight feet. His tractor is a four-wheel drive 25-hp Pasquali—articulated—with a pivot point at its center—for greater maneuverability.

Some of the best equipment is of his own invention: a scout jeep has metal frames welded both over the hood and behind the seat; a 7x5' piece of plywood fits into each. The scout—moveable, with these two large flat surfaces—is used for assembling orders and hauling (the frames have lips so plants don't slide). It works well.

Koelb also landscapers ("most landscapers use a surprisingly limited pallet; I try to give more choice")



—mostly for summer people in the Waterville Valley and Lakes areas. He works up designs from polaroids taken at preliminary visits. Currently, one of his more unusual designs (for a local Mexican restaurant) includes two Snake Spruce (*Picea abies vergata*) and cold-hardy *opuntia* cacti. His trademark is his familiarity with and use of these more unusual conifers ("Bristlecone Pine—*Pinus aristata*: not a bad foundation plant because it's so slow-growing"); but he works within the natural landscape ("usually a lot of rock"), trying "to compliment the area with something that isn't going to throttle the customer with maintenance." Customers come to the nursery and choose the material—often the specific tree—they want in their personal landscapes.

Advertising is word of mouth. He guarantees "plants I install if payments are adhered to."

In winter he runs a ski area on Campton Mountain for a private community in Waterville Valley. The area is small (about 800 feet vertical drop), but it's serious: a double chair lift, a rope tow, six downhill trails ("one challenging"), cross-country skiing—but there's no snow-making, so snow is important.

HIS HOME is on a rise overlooking 16 acres of pasture where his beef cattle graze; beyond that is the road, then the nursery, the river, the ridge line.... beside his house, on a rocky hillside, he's built a garden that's both pleasure and a place to learn about the plants he offers. He's found that *Abies concolor* 'Candicans'

(*Candicans Concolor* Fir) grows well on this high spot, far better than in the nursery below. ("Late frosts in the valley seem to kill the early growth—the trees hang on, but never prosper.") The three Mugo Pine in the garden are two feet across; some in the nursery are three times the size. He's surprised—all were started from seed ("the best are from seed") at the same time—and sees the difference in size as "the surprising amount of genetic variation."

Other surprises? Yes—two fine Weeping Coast Cedars (*Chamaecyparis nootkatensis* 'Pendula')—zone 6 or 7 trees—are thriving—and should not be; and a threadleaf Japanese Maple survives—at least the portion that's covered by snow.

The garden includes ground covers and *opuntia*, but it's mostly trees—an exceptional *Larix eurolepis* 'Varied Directions'—18 feet wide—is genuinely spectacular.

RIGHT NOW, dwarf conifers and weeping species are in fashion—garden centers around the state have seen increased interest in both. But after the fads have receded, the once-fashionable material can be seen for its genuine merit. And there would seem to be no better place to do this than here in this northern valley insulated by distance and snow. (B.P.)

Palmer Koelb and the Baker Valley Nursery is at PO Box 158, Route 25, in Wentworth, New Hampshire 03282. The phone number is 603-764-9993.

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COURSES AT THE THOMPSON SCHOOL

This is a partial listing of horticultural courses offered this spring at the UNH Thompson School. Some courses may have prerequisites (courses or experience). Additional courses are offered at UNH in Plant Biology, Entomology, and other departments. The spring semester runs from January 18 to May 7, 1995. You may enroll in these courses by phoning the Division of Continuing Education (DCE) at 603-862-2015. Make sure you get on their catalog mailing list, too. For more information, call 603-862-1035.

- HT244 Plant Propagation 3 cr. MW 9:10-10:00 A
- HT244 Plant Propagation L01 0 cr. T 10:10-12:00A
- HT244 Plant Propagation L02 0 cr. T 2:10-4:00P
- HT245 Nursery and Garden Center Mgmt 3 cr.
T 10:10-11:00A
- HT249 Introductory Floral Design 2 cr.
TR 3:10-6:00P
- HT252 Floral Design: Weddings 2 cr. TR 3:10-
6:00P (permission required)
- HT256 Vegetable Science 2 cr. TR 9:10-10:00A
- HT257 Horticultural Facilities Mgmt 2 cr. T 8:10-
9:00A
- HT257 Horticultural Facilities Mgmt 1 cr.
Hours arranged
- HT258 Bedding Plant Production 2 cr MW 10:10-
11:00A
- HT260 Garden Design and Culture 2 cr. MW 10:10-
11:00A, M 1:10-4:00P

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AG DEVELOPMENT UPDATE

Gail McWilliam

Did you know?

New Hampshire agriculture contributes nearly \$300 million to our state's economy each year and almost a third of this amount can be attributed to the ornamental horticulture industry.

[SPREAD THE WORD!]

This is the type of information that the New Hampshire Department of Agriculture's Division of Agricultural Development has been compiling and distributing during the past year. Determining estimates for the value of New Hampshire agriculture has been an important step in creating awareness. The information has since been presented at every opportunity—to the media, to consumer groups, agricultural groups, schools, legislators, etc. The more everyone knows and understands about the kind of contribution agriculture makes to New Hampshire, the better for all aspects of the industry, now and in the future. It's critical for producers to also know and understand not only their segment of the industry, but how it fits into the big picture and take an active role in telling the uninformed about New Hampshire agriculture.

The mission of the Division of Agricultural Development is to enhance and expand market opportunities for New Hampshire agricultural businesses. The Division also provides consumer information relative to the industry and New Hampshire products and handles media inquiries as well as other administrative tasks.

Resources are limited for agricultural development activities, so that means developing partnerships with other agencies and organizations to develop a team effort on behalf of the industry and share costs. The Division tries to focus on the "big picture" of New Hampshire agriculture while encouraging and assisting the individual commodity associations to market their own segment of the industry and work jointly for the benefit of all agriculture.

Examples of projects initiated this year by the Division of Agricultural Development that directly or indirectly impacted your industry include:

- Statistics compilation and development of a fact sheet highlighting the segments of the New Hampshire agricultural industry. Development of the "agricultural innovation" booklet featuring New Hampshire agricultural entrepreneurs. Development of a picto-

rial exhibit to help illustrate New Hampshire agriculture at a variety of events and shows

- Agricultural Promotion Mini-Grant program to support the promotion of NH agricultural products. Program provided \$6500 in grants matched to \$9000 in funds from organizations and groups involved in agricultural promotion activities. Fifteen projects were funded.

- The first-ever *New Hampshire Agricultural Products Wholesale Guide*, available in May and providing source information on a variety of items grown and made in New Hampshire. Since May, more than 500 guides have been distributed to potential buyers across the country and another printing is in process.

- Tourism efforts, including the compilation of information on agricultural businesses that welcome bus tours, the state rest area promotion program, the development and distribution of the *Rural New Hampshire Visitors Guide*, and working as part of the Timber/Agriculture/Tourism Coalition for the development and distribution of the *North Country Farm and Forest Visitors' Guide*.

- Collaboration with other agencies and organizations such as UNH, the Rural Development Council, NH Tourism and the other New England state departments of agriculture, to build opportunities for NH agriculture within New Hampshire and regionally.

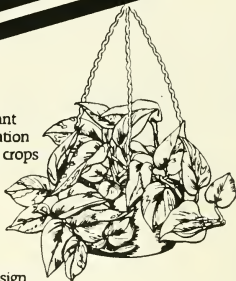
- Participation on the Eastern US Export Council to encourage food and agricultural businesses from New Hampshire to get into the export market.

It's been a busy year and some exciting new efforts are on tap for 1995. Anyone with questions or suggestions regarding agricultural development activities is encouraged to contact Gail McWilliam at the Division of Agricultural Development, 271-3788.

Gail D. McWilliam is Director of Agricultural Development, State of New Hampshire Department of Agriculture, PO Box 2042, Concord, NH 03302-2042.

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New Symbol For Nursery/Greenhouse Business Directional Signs

DAVID C. SEAVEY

Patience is Rewarded

The squeaky wheel finally got the grease as our diligent persistence paid off! Nearly two years have passed since Rick Simpson, Rolling Green Landscaping in Greenland, and UNH Cooperative Extension requested approval from the New Hampshire Department of Transportation for a business directional sign exhibiting a greenhouse/nursery symbol. The symbol received approval from the New Hampshire Landscape Association and the New Hampshire Plant Growers Association. The New Hampshire Department of Transportation Bureau of Municipal Highways approved the request in September, 1994.

We all know that gardening is one of the most popular recreational activities and that ornamental plants improve our quality of life and the air we breathe. Now the potted plant symbol finds itself among the ranks of other symbols designating summer and recreational activities and necessary services: gas stations, restaurants, and lodging.

Past History

A united effort involving UNH Cooperative Extension, New Hampshire Farm Bureau Federation, New Hampshire Tree Fruit Growers Association, New Hampshire Vegetable Growers Association, and New Hampshire Small Fruit Growers influenced the "powers that be" to adopt a special section dealing with tourism and roadside marketing of agricultural products. In 1990, a rule change by the New Hampshire Department of Transportation allowed roadside horticultural operations to erect business directional signs on all state highway right-of-ways except interstate turnpikes and divided limited-access highways.

The legislature has mandated the business directional sign as an official state sign which takes precedence over local town sign ordinances.

Qualifications

- One of two criteria must be met.
 1. A principal activity is education or illustration of the history or development of specialized agricultural products, processes, or husbandry

2. A principal activity is the production and sale of seasonal agricultural products. An operation that is strictly wholesale would not be eligible.

- The business must be open at least five hours a day, five days a week, and three months of the year. If the business is closed for more than fifteen days, the sign must be removed or covered.
- The sign must be within five miles of the business

Sign Construction

Signs are manufactured in accordance with state specifications and have a high quality of workmanship.

The applicant bears all costs of sign manufacture, installation, and maintenance. In a given instance, one operator purchased two business directional signs for \$567.00.

1. 6 ft x 16 in., 5-inch letters on blue background;
2. 7 ft x 20 in., 6-inch letters.

The state will determine the location of sign(s), number of signs, and supervise their installation. One panel per business per sign is allowed.

Due to the exact requirements involving letter size, materials, etc., it is best to leave construction to a professional private sign maker or the sign shop at the State Prison Correctional Industries.

Application

A new permit is issued each year on April 1st. It is important to apply early because it will take approximately three months for approval. The yearly permit fee is \$10.

Where to Go

It is necessary that consistency be maintained in the manufacture of these signs. For application forms and sign specifications, contact Robert Barry, Administrator, Bureau of Municipal Highways, or Walter Keyenhoff, Department of Transportation, Room 111, Hazen Drive, Concord, NH 03301. Telephone (603) 271-2107. Thank them for their support.

David Seavey is Extension Educator, Agricultural Resources, UNH Cooperative Extension, Merrimack County.

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Melody, Pink, Ogl
Pink Expectations, Ogl
Snow White, Ogl
Aurora (violet)
Beth, (light pink)

IVIE GERANIUM

Sybil Holmes (rosebud pink)
Amethyst (violet)
Bluebeard (deep burgundy)
Beauty of Eastbourne (rose)
Simone, Red, Ogl
Nicole, Pink, Ogl
Minicascade (red)

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Blue Eyes (red/blue)
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Factors in Farm Stand Success

PAUL REES

Changes in both agriculture and the marketplace have forced today's producer to redirect his efforts from a totally production-oriented enterprise to one that includes a strong marketing component. Most farmers are accomplished producers and excel at growing quality products. Unfortunately, many forget that they must now be accomplished marketers as well.

Farm stands are just one of several different types of direct sale opportunities that today's producer can use to get their product from the field to the consumer's table. In order to minimize labor and costs and to get the most from marketing efforts, farm stand operators should take some time to consider the customer and what can be done to better meet his/her needs and expectations. As I come to the end of my first year as an Extension Educator for Agricultural Resources, I recall the numerous occasions I've met with agricultural producers and consumers throughout Sullivan County. Personal observations, reinforced by discussions with both farm stand operators and their customers, have identified several key factors that contribute to the success of local farm stands.

APPEARANCE

How does the farm stand look to the customer? The appearance of the farm stand is one of the most influential factors for attracting and keeping the customer. The farm stand frontage, parking area, and signage are the first and last things the customer will see. Many of today's consumers have become accustomed to shopping at large commercial outlets with acres of waxed floors, miles of steel shelving, well-labeled products, and colorful displays. Farm stand operators should consider this fact when planning the floor layout and display area. This *does not* mean that the farm stand should be polished or "antiseptic" in appearance. What it does mean is that customers have come to expect a clear floor space, open aisles, accessible product displays, and visible, easy-to-read signage. Proper lighting is also important as consumers tend to shy away from dark areas even in supermarkets!

HOSPITALITY

Hospitality is all-important in building and maintaining your customer base. Good service, a friendly smile, and that extra little bit of attention to detail will go a long way to keeping repeat customers.

Within a year, the farm stand operator can look forward to hundreds and perhaps thousands of individual transactions with customers. Operators should treat each and every transaction as if it was a major product sale. Anticipate the repeat sale and treat the customer with genuine attention. The old adage that "the customer is always right" holds pretty true in most instances.

QUALITY PRODUCT

The chance to buy a higher quality product draws consumers to the local farm stand. Most prefer produce with a "just-picked freshness" to that which is waxed, shrink-wrapped, or made available only after long-term storage. Farm stand operators should also realize that their responsibility for the quality of their product doesn't necessarily end when the consumer leaves the stand. Quick, friendly advice about product handling can prevent transport and storage problems for the customer. Leaflets and other printed material covering handling, storage, and processing are used and appreciated as well.

VARIETY

Successful marketing means giving the customer what he/she wants—and today's consumers are used to the convenience of "one-stop-shopping." This can place the farm stand in a difficult situation unless it is able to provide not only quality products, but a broad selection as well. Customers are attracted by opportunities to select from a variety of choices; they enjoy "companion products" such as herbs used in processing or other products that enhance flavor or create a variety of uses. If a farm stand has built a reputation for a certain product, the operator should consider offering more than one variety or finding alternatives in the way the product is packaged or processed. Many traditional farm stands that have offered only vegetables or fruit are now offering ornamentals, bedding plants, or seasonals such as pumpkins or holiday wreaths. These products are excellent for minimizing overhead during slower months while at the same time taking advantage of the "unique" opportunity to provide an infrequently available product.

ACCESSIBILITY AND CONVENIENCE

Accessibility and convenience are also highly valued by the consumer. Distance from home to the market is

a factor over which the farm stand operator has little control. Some farm stands have tried "accessory outlets" such as smaller portable stands which are erected at busy intersections, fairs, shows, and other community events. These small stands have the advantage in that they can be used where there is a large concentration of potential customers, reduce travel distance and—if properly constructed—also help to promote the "main" farm stand while they showcase its finest products. Unfortunately, these smaller portable stands do require additional labor that is often not available to the smaller operators.

Convenience also means that customers can easily locate, park at, and enter your farm stand. Good signage with your name, products, and hours of operation make your business more customer friendly. Congested or poorly maintained parking areas may deter potential customers. Muddy or cluttered entrances are less than inviting to many folks who may have become accustomed to electric doors

THE EXPERIENCE

Experience is an excellent marketing tool that is often overlooked. Visiting a farm stand "in the country" offers the consumer a chance to experience a change of pace from the city. Many older consumers remember growing up on the farm and use the farm stand shopping experience as a means to reminisce. Young families enjoy the scenery, the smells of fresh produce, and the chance to learn about local agriculture. Farm stand operators should learn to utilize the consumer's

desire to experience something they can't get at the mall or shopping plaza. Decorations of brightly colored flowers and produce, strategic displays of unique or locally preferred products, and courteous customer relations provide for a positive and memorable experience that can lead to repeat sales for many seasons.

PRICE

Price is one of the first things the consumer considers when buying agricultural products. While it is difficult for many of the smaller operators to compete against larger corporate outlets, prices for the most part remain comparable and competitive. While large outlet chains have the advantages of volume purchasing, they must also contend to some degree with product perishability and shipping costs. This is where local farm stand have a slight advantage. Most consumers are willing to spend slightly more for what they perceive to be a better quality product.

These are only a few of the marketing strategies that enable the farm stand operator to build and maintain a viable customer base and remain competitive in today's highly volatile market.

Since December 13, 1993, Paul Rees has been Extension Educator for Agricultural Resources for Sullivan County. This article is an opportunity for him to introduce himself to *The Plantsman* readers and share some of the observations he's made while visiting agricultural enterprises during his first year at his new job. He's at 24 Main Street, Newport, and can be reached at 603-863-9200.

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Stock Plant Recommendations

Since stock plants provide the starting material for the entire next crop, their quality and care is very important.

Start with clean new stock, virus-indexed if possible. Provide a clean area for them. Removal of weeds and sanitizing with a dilute bleach solution is the minimum treatment that should be done in an area with no history of problems with thrips or bacterial infections. Areas where thrips or bacteria have been a problem must be fumigated.

The goal of stock plant management is to keep the plants actively growing and healthy. Use a soilless medium with excellent drainage, such as a mixture based on 60% peat moss, 20% perlite and 20% vermiculite, with dolomitic lime added for pH adjustment.

Monitor the fertility level of the media. Regular tracking of electrical conductivity (EC) levels allows you to respond to conditions in the pot, and will eliminate many problems. Generally an EC of 0.9 to 1.0 mS (1:2 extraction method) provides sufficient nutrients for healthy growth.

Avoid using oversized containers—6-inch pots should be adequate for New Guinea impatiens, and 7 or 8-inch pots for geraniums.

The presence of buds or flowers on cuttings causes problems in propagation, so keep stock plants vegetative.

Prevent flowering in short-day plants such as poinsettias by lighting them during the night.

Long-day plants must be shaded to provide long nights, or treated with chemical plant growth regulators to prohibit flowering. An ethylene source such as Florel can be used to maintain vegetative growth. Wait 2 weeks after the treatment before taking cuttings.

For production of flowering plants, ethylene treatments should stop 9 weeks before sale of New Guinea impatiens, and 7 weeks before sale of fuchsia or geraniums. Gibberellic acid and Cycocel also can improve cutting quality, and will not reduce the yield of cuttings harvested.

The effectiveness of all growth regulators is strongly influenced by environmental conditions, cultivar, and the age of the plant. It's a good idea to trial these chemicals on a small number of plants first, and record the results.

Prevent fungal diseases on the stock plants, not in the propagation beds. Spraying fungicides on the rooting cuttings, and then turning on the mist, is very ineffective. In addition, try to minimize the number of visitors or salespeople that come into contact with your stock plants.

Adapted from a presentation by Milhem Sawaya, Focus Greenhouse Management, PPGA Conference, October, 1993, Tampa, Florida. Transcribed by Cathy Whitman, Michigan State University (from PPGA News, September, 1994).

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abamectin	Avid	0.15E	Merck	Misc	III	lm, mi	Not comp. with some pred. mites and insects, short residual
acephate	Orthene TT&O PT 1300	75S aerosol	Valent Whitmire	OP	III	ap, fg, lm, mi, thr, wf	Not compatible Not compatible
azadirachtin	Margosan-O Azatin EC	0.3%E 3%E	Scotts AgriDyne	Bot-IGR	IV	ap, fg, lm, th, wf, w, etc	Compatible with most
<i>Bacillus thuringiensis</i> Berlinger var. <i>kurstaki</i>	Biobit Dipel 2X Bactospeine Javelin Larvo-BT Steward Sok-B t Thuricide	F or W W or 4L F or W WG F WG	Dupont Abbott Biochem Sandoz	Micro	IV	Several lepidopterous larvae or worms	Compatible with beneficials
<i>Bacillus thuringiensis</i> Berlinger var. <i>israelensis</i>	Gnatrol	F		Micro	IV	Fungus gnats	Compatible with beneficials
bendiocarb	Dycarb	76W	Scotts	Carb	II	ap, mi, s, th, w, wf, etc	Not compatible
bifenthrin	Talstar T&O PT1800 Attain	10W or 67F aerosol	FMC Whitmire	Pyr	II	ap, fg, lm, mi, s, th, w, wf, etc	Not compatible
carbaryl	Sevimol Sevimol 4E Sevin 4S, 50W, 80S, XLRT	4F 4F 4E 4S, 50W, 80S, XLRT	Rhone-Poulenc Carb Chipco Drexel Rhone-Poulenc	Carb	III	ap, s, th, w, etc	Not compatible
chlorpyrifos	Dursban DuraGuard Pageant	50W 2F 2F	DowElanco Whitmire	OP	II	ap, fg, lm, mi, s, th, w, wf, etc	Not compatible
cyfluthrin	Decathlon	2E, 20W	Olympic	Pyr	III	ap, fg, s, th, w, wf, etc	Not compatible
cyromazine	Citation	75W	Ciba	IGR	III	lm	Compatible
diazinon	Knox-Out PT 1500 Diazinon	2F aerosol 50W, 4E	Whitmire Whitmire Drexel	OP	II	ap, fg, lm, mi, s, th, w, wf, etc	Not compatible
dicofol	Kelthane	35W	Rohm & Haas	CH	II	mi	Not compatible with pred. mites
dienochlor diflubenzuron	Pentac Dimilin	4F 25W	Sandoz Uniroyal	CH IGR	III III	mi w	Compatible with insects Compatible with some insects
d-phenothrin	Sumithrin PT 1400	2E aerosol	Olympic Whitmire	Pyr	IV	ap, mi, s, wf	Not compatible
fenoxycarb	Precision Preclude	75W aerosol 2F	Ciba Whitmire	Carb	IV	fg, s, wf	Compatible
fenvalerate	Pydrin	2F		Pyr	III	w, wf, etc	Not compatible
fluralaner	Mavrik Aqu	2F	Sandoz	Pyr	II	ap, mi, s, th, w, wf, etc	Not compatible
imidacloprid	Marathon	1%G	Olympic	Misc	III	ap, s, th, wf	Compatible with some insects

Common Name	Trade Name	Formulation ^a	Manufacturer	Class ^b	Toxicity Category	Labeled For ^c	Compatibility with Beneficials
Potassium salts of fatty acids (insecticidal soap)	M-Pede	49%E	Mycogen	Misc	IV	ap, mi, s, th, wvf	Direct damage to beneficials, but they can be introduced after spray dries
Hort oil	Sunspray ultrafine Saf-T-Side		Mycogen Florikan	Misc	IV	ap, fg, lm, mi, s, th, wf	Direct damage to beneficials, but they can be introduced after spray dries
S-kimoprene	Enstar II	SE	Sandoz	IGR	IV	ap, fg, s, wf	Compatible
malathion	Malathion Malathion	8E 8E	Amer Cyan Platte	OP	III	ap, lm, s, w, wf, etc	Not compatible
methiocarb	PT 1700 Grandslam	aerosol 75W	Whitmire Olympic	Carb	II	ap, mi	Not compatible
pyrethrins	Pyreth-it X-clude Pyrenone PT1100 Natural Plus	aerosol 1.1%L 6%E aerosol 3.0%E	Whitmire Whitmire Whitmire Whitmire Olympic	Bot	III	ap, fg, mi, th, w, wf, etc	Not compatible
resmethrin	Resmethrin PT 100	2E aerosol	Pratt Whitmire	Pyr	III	ap, fg, mi, s, th, w, wf, etc	Not compatible
Steinernema carpocapsae	Exhibit		Ciba	Nema	IV	fg	Compatible

a—Formulations of insecticides: E=emulsifiable concentrate, F=flowable concentrate, G=granule, S=soluble powder, WG=wettable granules, and W=wettable powder

b—Class of insecticides: Bot=botanical, Carb=carbamate, CH=chlorinated hydrocarbon IGR=insect growth regulator, Micro=microbial, Misc=miscellaneous, Nema=nemalode, OP=OrganoPhosphate, Pyr=pyrethroid

c—Key to pest abbreviations (only general category of major pests listed): ap=aphids, fg=fungus gnats, lm=leaf miners, mi=spider mites, s=scales or mealybugs, th=thrips, w=worm (caterpillars) and wf=whiteflies. The etc at the end indicates registration on several more pests.



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The month of September held true to my predictions: samples continued to arrive throughout the month, resulting in the greatest number of samples for the month of September in the nine years I've been here. Thankfully, the numbers dropped by half during October and I can finally direct some time to computerizing the PDL records.

The majority of the diseases diagnosed during September and October were also problems that were also seen during the month of August. Thanks to the warm weather, brown patch and Pythium continued to plague home lawns and a few golf course putting greens. The moisture and somewhat cooler temperatures during early September created ideal conditions for mushroom growth. As a result, I received several telephone calls from worried home owners concerned with ridding their lawns of the troublesome fungi. I usually suggested mowing or having patience and waiting for drier weather. Powdery mildew was also a common problem on home lawns during September and October. A few individual cases of anthracnose on deciduous trees, Botrytis on various flowering plants, and miscellaneous fruit rots were also diagnosed.

There were a few interesting or important diseases that were diagnosed in the last two months (Sept.-Oct.). Five samples of fir seedlings (balsam and Fraser) with basal Phomopsis canker were diagnosed. The disease appears to be more of a problem on plants that have been stressed. Drought stress (1993 and June 1994), cold injury before a good snow cover was established, and a late frost in May

1994 all contributed to predisposing the tissues at the base of the stems to infection by Phomopsis. Similar problems on fir seedlings were reported by most of the diagnosticians at a recent Northeast pathology meeting in Ithaca, NY. Phyllosticta needle blight was diagnosed on balsam, Fraser, and concolor firs. This needle blight has been increasing in frequency over the last few years. Very little is known about the life cycle of the fungus, but the general consensus among tree pathologists is that infections first occur around the time of bud break and may continue for three weeks or more. Three hemlock samples with Fabrella needle blight were received in September. This is a disease that occurs sporadically, usually after periods of stress caused by drought or winter injury. Symptoms of Rhizosphaera needlecast on spruce began to show up in mid-October. The symptoms were most likely the result of infections that occurred during late-August or early-September.

The most notable problems on greenhouse crops were Fusarium wilt and impatiens necrotic spot virus (INSV) on cyclamen. Fusarium wilt seems to be a significant problem in the cyclamen crop this year. Symptoms include yellowing and wilting of the older, outer leaves, stunting, and eventual collapse of the entire plant. Another diagnostic feature of the disease is a black streaking or discoloration of the vascular system that is evident when a cross-sectional cut is made through the stem. Infected plants should be destroyed and the remainder of the crop should be drenched with an appropriate fungicide. At the recent Northeast pathology meetings, Rob Wick (U

Mass.) reported the occurrence of another disease called Cryptocline that has symptoms similar to Fusarium wilt. The discoloration is limited primarily to the upper portions of the stem, however, and streaking also occurs in the petioles. Pythium root rot has shown up on a few poinsettias, but doesn't seem to be a major problem.

During the next month, be sure to protect shrubs and against snow and ice damage and winter desiccation. If the Old Farmer's Almanac is correct, we should have snow cover by the end of November! Poinsettias should continue to be monitored for powdery mildew (to the best of my knowledge, only four cases have been reported nationally). If mildew is suspected, please submit samples to the PDL for confirmation. As I mentioned in the last issue, geraniums should be carefully inspected and monitored for bacterial blight (see the June/July issue of *The Plantsman* for a description of symptoms). And remember, nothing beats good SANITATION and careful monitoring for preventing disease problems.

There is one additional note I'd like to mention and that is that a fee system will be instituted for samples submitted to the Plant Diagnostic Lab by late spring, 1995. The exact fee and final details will be reported in one of the upcoming issues of *The Plantsman*.

If you wish to submit plant material to the PDL for diagnosis, send samples to: Dr. Cheryl Smith, Plant Diagnostic Lab, Nesmith Hall, UNH, Durham, NH 03824. Samples should be accompanied by an identification form (available from your county Cooperative Extension office). There is no fee (at this time). Cheryl Smith is the UNH Cooperative Extension Specialist in Plant Health, and can be reached at (603) 862-3841.

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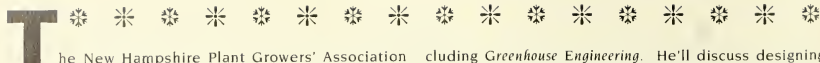
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The New Hampshire Plant Growers' Association Annual Winter Meeting, our second joint meeting with the New Hampshire Landscape Association, will be held on Wednesday, January 18, at the Granite Street Bar & Grill, 50 Philippe Cote Street, Manchester.

After registration and coffee (8-8:30) and a brief business meeting (8:30-9—both groups will have their business meetings at this time), the day's program of speakers begins. Topics have been chosen to interest members of both organizations and the program is varied, with speakers coming from a variety of disciplines.

There have been a lot of questions about a company safety handbook which will be required in 1995. The first speaker (unannounced as of November first!) will clarify what is expected and how to go about doing it. It's something you should know.

The next speaker is Robert Childs. Bob is an instructor of entomology in the Stockbridge School of Agriculture at the University of Massachusetts, an Extension Specialist, senior editor of the 1994 *New England Recommendation Guide for Insects, Diseases, and Weeds of Shade Trees and Woody Ornamentals*, and coordinator of the Urban Forestry Diagnostic Lab at UMass Amherst.

The last speaker before lunch will be John Bartok, Extension Agricultural Engineer, Natural Resources Management and Engineering Department, University of Connecticut, Storrs. Since 1966, he's been a member of the Cooperative Extension System providing technical assistance to the greenhouse/nursery industry and various energy programs in New England. He's authored or co-authored 400 technical papers, bulletins, and articles on greenhouse systems, controlled environment plant growth, and energy alternatives, writes the monthly "Technology" column for *Greenhouse Manager*, and is author of four books, in-

cluding *Greenhouse Engineering*. He'll discuss designing greenhouse systems—layout, materials flow, organizing structures around work patterns.

After lunch (12-1) and a chance to socialize, there are two other speakers.

The first is Heather McCargo, Head Propagator at The Garden in the Woods, in Framingham, Massachusetts, the

botanical garden of the New England Wildflower Society. She knows her Northeastern natives, how to propagate them, and their landscape uses. Her topic: "Cultivation and Propagation of Native Plants."

The second is Joseph Hudak, "a nationally recognized landscape architect who has served more than 3000 individual and corporate clients in the course of his 40-year practice. Plant materials instructor for twenty years in the Department of Landscape Architecture at Harvard University's Graduate School of Design, he's written several books, including the original *Gardening With Perennials Month by Month*. This American classic on perennials, first published in 1976 and reprinted in 1985, was taken as a selection of the Garden Book Club and is largely responsible for the popularity of perennials today."

It's a full day—new topics and old friends in a familiar setting.

The price is \$24.00 for the first person from each company and \$22.00 for each person after that. Registration material is included in your membership renewal package. (You may have it already.) If you want the entire day's events (meeting and meal), return your registration form by January seventh. Walk-ins are welcome—the price (\$18) doesn't include the meal. (There are other restaurants nearby.)

So mark January 18th on your calendar. We hope to see you then.

WINTER MEETING 1995

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